

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-22 (Cancelled)

23. (Currently amended) The mutant endotoxin made according to the method of claim ~~35~~ 22, wherein the mutant endotoxin ~~is was~~ purified from the mutant non-typeable *Haemophilus influenzae* ~~gram-negative bacterial mutant pathogen~~ by phenol-water extraction or by protease digestion.

24. (Previously presented) The mutant endotoxin according to claim 23, wherein the mutant endotoxin is conjugated to a carrier protein.

25. (Currently amended) The mutant endotoxin made according to the method of claim ~~35~~ 22.

26. (Previously presented) The mutant endotoxin according to claim 25, wherein the mutant endotoxin is conjugated to a carrier protein.

Claims 27-34 (Cancelled)

35. (New) A method of making a mutant endotoxin comprising mutating *htrB* gene within a wild-type non-typeable *Haemophilus influenzae*, wherein the *htrB* mutation produces a mutant non-typeable *Haemophilus influenzae* having a mutant endotoxin containing a decreased phosphoethanolamine content and an increased hexose content in the mutant endotoxin's inner core, and a pentaacylated or tetraacylated lipid A lacking one or two secondary acyl chains compared to the corresponding wild-type non-typeable

*Haemophilus influenzae* hexaacylated endotoxin, and wherein the mutant endotoxin has substantially reduced toxicity as compared to the hexaacylated endotoxin of the wild-type non-typeable *Haemophilus influenzae*; and purifying the mutant endotoxin.

36. (New) A method for producing antisera containing antibodies specific to a mutant endotoxin from an *htrB* mutant non-typeable *Haemophilus influenzae*, the method comprising

(a) immunizing an individual with a formulation comprising: (1) an *htrB* mutant non-typeable *Haemophilus influenzae* having a mutant endotoxin, (2) the mutant endotoxin, or (3) the mutant endotoxin conjugated to a carrier protein, wherein the mutant endotoxin contains a decreased phosphoethanolamine content and an increased hexose content in the mutant endotoxin's inner core, and a pentaacylated or tetraacylated lipid A lacking one or two secondary acyl chains compared to the corresponding wild-type non-typeable *Haemophilus influenzae* hexaacylated endotoxin, and wherein the mutant endotoxin has substantially reduced toxicity as compared to the wild-type non-typeable *Haemophilus influenzae* hexaacylated endotoxin; and

(b) collecting the antisera containing the antibodies from the immunized individual.